SBC Series

Full Size 11-slots Chassis

FA-UNIT-F11BE

Full Size MicroATX Chassis

FA-UNIT-F11ME

User's Manual

CONTEC CO.,LTD.

Check Your Package

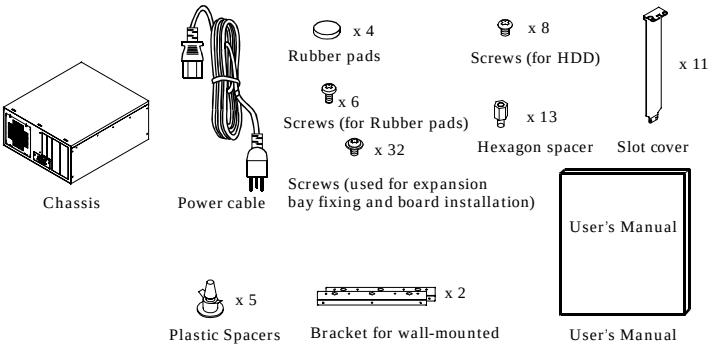
Thank you for purchasing the CONTEC product.

The product consists of the items listed below.

Check, with the following list, that your package is complete. If you discover damaged or missing items, contact your retailer.

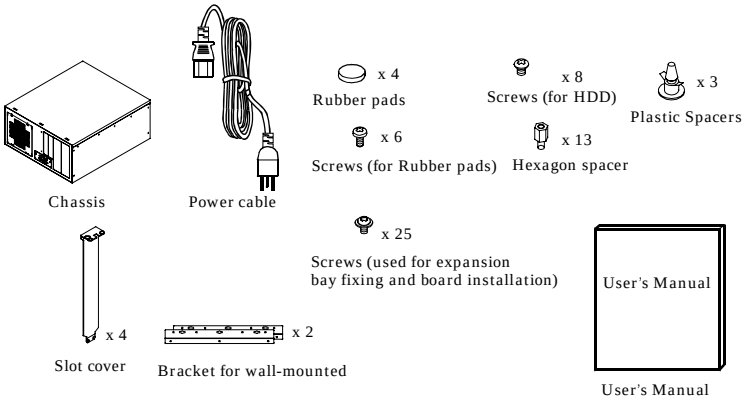
Product Configuration List <FA-UNIT-F11BE>

- Chassis [FA-UNIT-F11BE]…1
- Power cable…1
- Rubber pads…4
- Screws (for Rubber pads) (M4 x 8)…6
- Screws (used for expansion bay fixing and board installation) (M3 x 6)…32
- Screws (for HDD) (#6-32UNC x 5)…8
- Hexagon spacer…13
- Plastic Spacers…5
- Bracket for wall-mounted…2
- Slot cover…11
- User's Manual…1



Product Configuration List < FA-UNIT-F11ME >

- Chassis [FA-UNIT-F11ME]…1
- Power cable…1
- Rubber pads…4
- Screws (for Rubber pads) (M4 x 8) …6
- Screws(used for expansion bay fixing and board installation) (M3 x 6)…25
- Screws (for HDD) (#6-32UNC x 5)…8
- Hexagon spacer…13
- Plastic Spacers…3
- Bracket for wall-mounted…2
- Slot cover…4
- This User's Manual…1



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1. Before Using the Product

This chapter provides information you should know before using the product.

About the Chassis

FA-UNIT-F11BE is a chassis used to mount a backplane and SBC and configure a computer system in combination with expansion boards and various drives.
FA-UNIT-F11ME is a chassis used to mount a motherboard and configure a computer system in combination with expansion boards and various drives.

Features

FA-UNIT-F11BE:

- A PICMG compliant, PCI bus or ISA bus backplane can be mounted.

FA-UNIT-F11ME:

- An Micro ATX motherboard can be mounted.

Common:

- Equipped with 5-inch-drive bay x 2 and 3.5-inch drive bay x 2.
- Equipped with a power switch, reset switch, and USB connectors at the front.
- Equipped with a built-in cooling fan. The dustproof filter and cooling fan can be replaced externally. These fans can easily be replaced externally, without removing the top cover.
- A chassis fixing bracket is attached as standard.

Configuration

Backplanes and mother boards are sold separately. You need prepare a CONTEC backplane corresponding to this product, separately. For more details of the corresponding backplanes, see "Option".

When using a third-party's backplane or motherboard, pay attention to the positions of the backplane or motherboard installation holes, installable size, and power supply specifications of this product.

This product has a space that can contain two 5-inch drives and two 3.5-inch drives. It also has a power ON/OFF switch, power supply LED, HDD access LED, reset switch and two USB connectors on the front surface of the case.

* Depending on the combination of the backplane, SBC and expansion board mounted on FA-UNIT-F11BE, one of the two installable 3.5-inch drives may not be installed. For details, contact our general information center.

Option

Installable backplanes

- BPI-1111 PICMG Backplane with 10-Slots(PICMG x 2, PCI x 4, ISA x 4)
- BPM-1111 PICMG Backplane with 11-Slots(PICMG x 2, PCI x 8, ISA x 1)
- BPC-1111 PCI Backplane with 10-Slots(PCI x 10)

Other

- FA-CLAMP-01 Clamp for PCI/ISA board (5 pcs)

* Check the CONTEC's Web site for more information on these options.

Available Replaceable Parts for Maintenance

- POW300X 300W ATX Power Supply
- FAN1225S Fan 120 x 25 with Sensor
- FAN0825S Fan 80 x 25 with Sensor
- FLT121 Fan Filter (127 x 127)

Customer Support

CONTEC provides the following support services for you to use CONTEC products more efficiently and comfortably.

Web Site

Japanese http://www.contec.co.jp/
English http://www.contec.com/
Chinese http://www.contec.com.cn/

Latest product information

CONTEC provides up-to-date information on products.

CONTEC also provides product manuals and various technical documents in the PDF.

Free download

You can download updated driver software and differential files as well as sample programs available in several languages.

Note! For product information

Contact your retailer if you have any technical question about a CONTEC product or need its price, delivery time, or estimate information.

Limited One-Year Warranty

CONTEC products are warranted by CONTEC CO., LTD. to be free from defects in material and workmanship for up to one year from the date of purchase by the original purchaser.

Repair will be free of charge only when this device is returned freight prepaid with a copy of the original invoice and a Return Merchandise Authorization to the distributor or the CONTEC group office, from which it was purchased.

This warranty is not applicable for scratches or normal wear, but only for the electronic circuitry and original products. The warranty is not applicable if the device has been tampered with or damaged through abuse, mistreatment, neglect, or unreasonable use, or if the original invoice is not included, in which case repairs will be considered beyond the warranty policy.

How to Obtain Service

For replacement or repair, return the device freight prepaid, with a copy of the original invoice. Please obtain a Return Merchandise Authorization number (RMA) from the CONTEC group office where you purchased before returning any product.

* No product will be accepted by CONTEC group without the RMA number.

Liability

The obligation of the warrantor is solely to repair or replace the product. In no event will the warrantor be liable for any incidental or consequential damages due to such defect or consequences that arise from inexperienced usage, misuse, or malfunction of this device.

Safety Precautions

Understand the following definitions and precautions to use the product safely.

Safety Information

This document provides safety information using the following symbols to prevent accidents resulting in injury or death and the destruction of equipment and resources. Understand the meanings of these labels to operate the equipment safely.

⚠ DANGER	DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
⚠ WARNING	WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
⚠ CAUTION	CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or in property damage.

FCC PART 15 Class A Notice

NOTE

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference at his own expense.

WARNING TO USER

Change or modifications not expressly approved the manufacturer can void the user's authority to operate this equipment.

Handling Precautions

⚠ CAUTION

- If you turn the power switch off, wait for at least five seconds before turning it on again.
- When plugging or unplugging the power cable, be sure to hold the plug itself.
- Since the product is a precision device, do not use or store it where it is subject to shock or vibration. Also avoid any place where the unit is exposed to direct sunlight, extremely high or low humidity, or much dust.
- Do not use or store this product where it is exposed to any chemical directly or as vapor in the air.
- This product has ventilating slits to prevent it from being heated excessively. Avoid using the unit with the ventilating slits blocked or in an ill-ventilated place.
- Do not use this product near equipment generating a strong magnetic field or noise, or the field or noise may cause this product or personal computer to malfunction.
- It is very dangerous to use this product with water, liquid, or metal (conductive) chips left inside. Be careful not to let such foreign matters in this product.
- When installing or removing an interface board into/from an expansion slot, be sure to remove the cable from the AC inlet.
- The total power consumption by the boards installed in expansion slots must not exceed the rating.
- If the product becomes dirty, wipe it carefully with a soft cloth damped with water or a solution of neutral detergent. Keep in mind that using a volatile solvent, such as benzine or thinner, or a chemical can deform or discolor the surface of this product.
- When performing maintenance of boards and electrical system components, be sure to remove the cable from the AC inlet.
- The installable power supply is one that can be used in industrial environments where spike voltage of 1.5kV or so is generated. If spike overvoltage higher than this voltage is generated, protective actions may be required.
- The specifications of this product are subject to change without notice for enhancement and quality improvement.
  Even when using the product continuously, be sure to read the manual and understand the contents.
- Do not modify the product. CONTEC will bear no responsibility for any problems, etc., resulting from modifying this product.
- Regardless of the foregoing statements, CONTEC is not liable for any damages whatsoever (including damages for loss of business profits) arising out of the use or inability to use this CONTEC product or the information contained herein.

Environment

Use this product in the following environment. If used in an unauthorized environment, the board may overheat, malfunction, or cause a failure.

Operating temperature

0 - 50°C

Operating humidity

10 - 80%RH (No condensation)

Corrosive gases

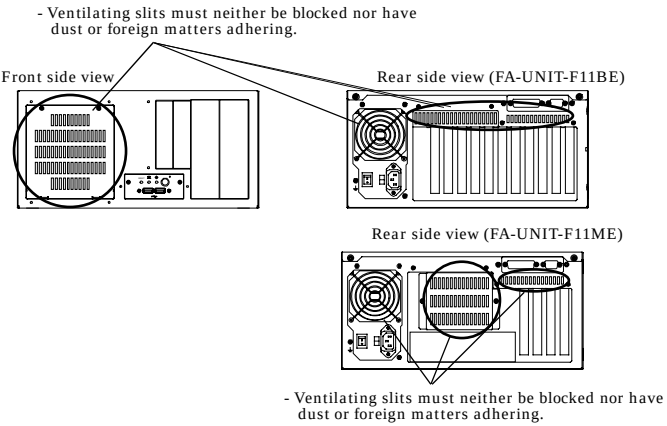
None

Floating dust particles

Not to be excessive

Inspection

Inspect the product periodically as follows to use it safely.


- Ventilating slits must neither be blocked nor have dust or foreign matters adhering.
Front side view
Rear side view (FA-UNIT-F11BE)
Rear side view (FA-UNIT-F11ME)
- Ventilating slits must neither be blocked nor have dust or foreign matters adhering.

Storage

When storing this product, keep it in its original packing form.

(1) Put this product in the storage bag.

(2) Store the package at room temperature at a place free from direct sunlight, moisture, shock, vibration, magnetism, and static electricity.

Disposal

When disposing of the product, follow the disposal procedures stipulated under the relevant laws and municipal ordinances.

2. Name of Each Part and Dimensions Diagram

Parts of the Chassis

Front Side View

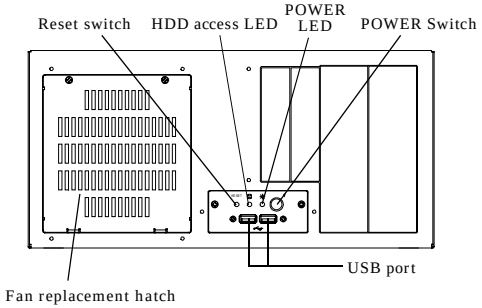


Figure 2.1. Front Side View

Rear Side View

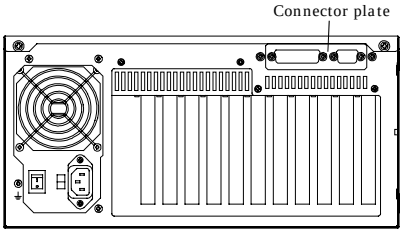


Figure 2.2. Rear Side View of FA-UNIT-F11BE

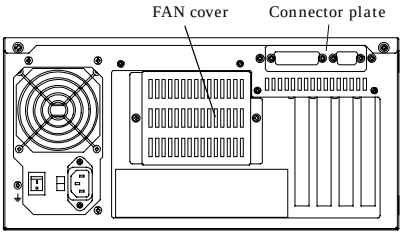


Figure 2.3. Rear Side View of FA-UNIT-F11ME

Dimensions

FA-UNIT-F11BE

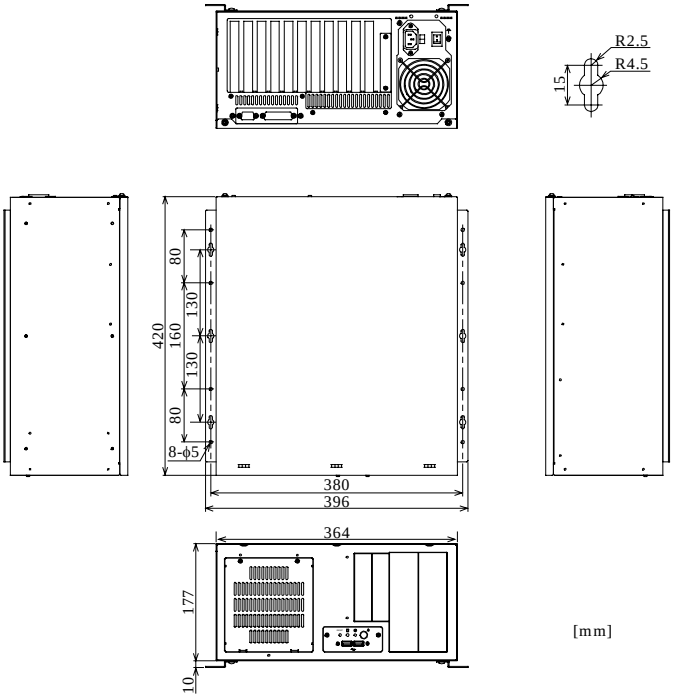


Figure 2.4. Dimensions < FA-UNIT-F11BE, Horizontally placed >

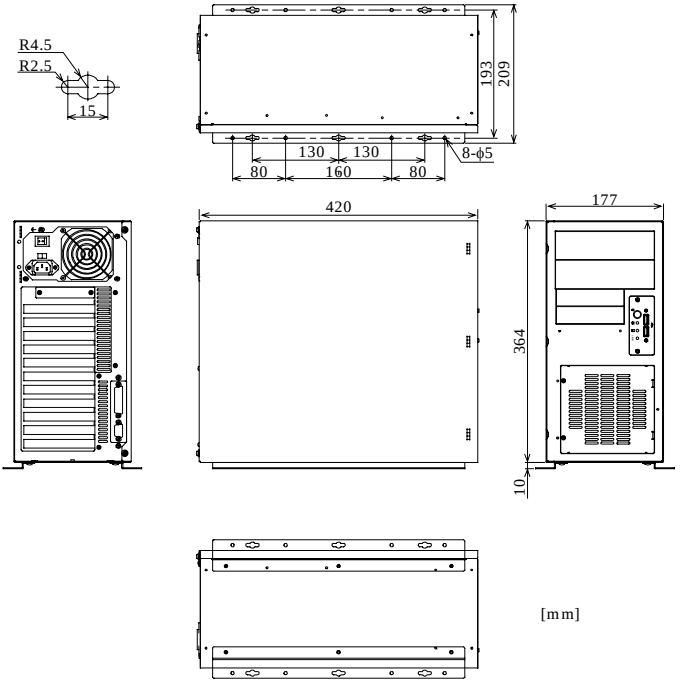


Figure 2.5. Dimensions < FA-UNIT-F11BE, Vertically placed >

FA-UNIT-F11ME

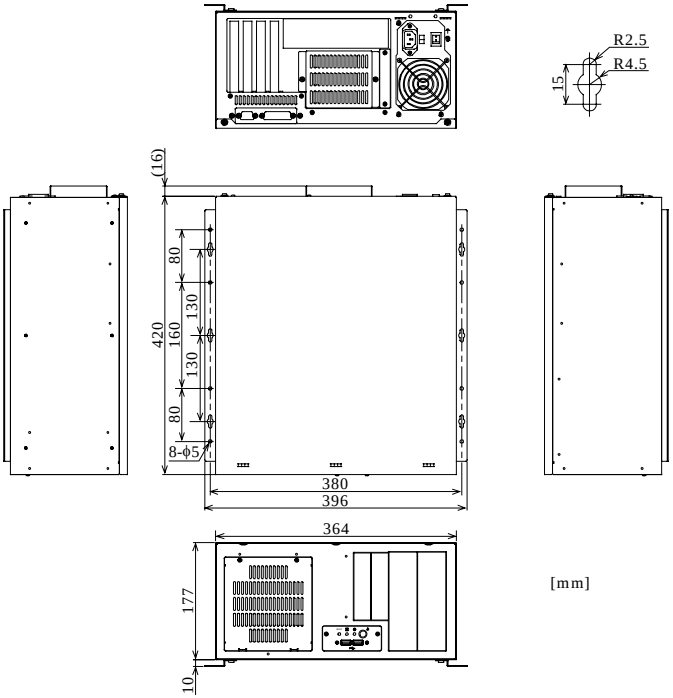


Figure 2.6. Dimensions < FA-UNIT-F11ME, Horizontally placed >

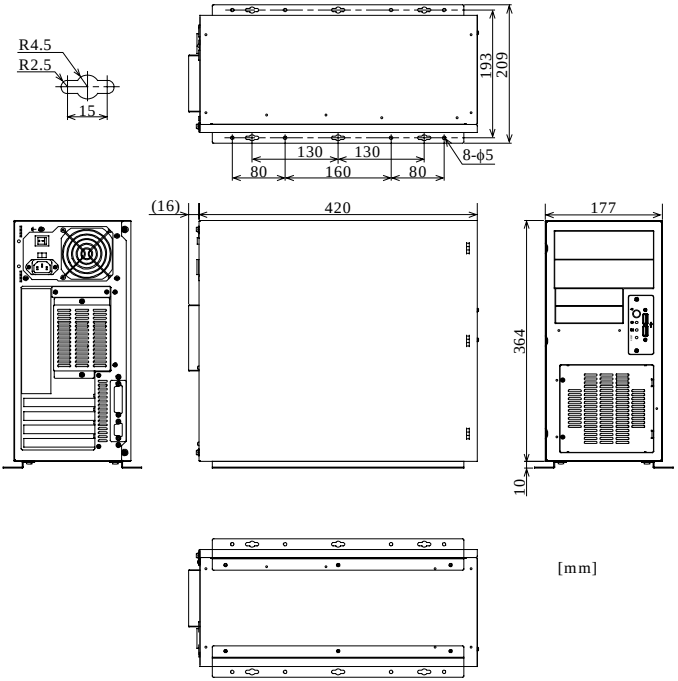


Figure 2.7. Dimensions < FA-UNIT-F11ME, Vertically placed >

Positions of backplane or motherboard installation holes

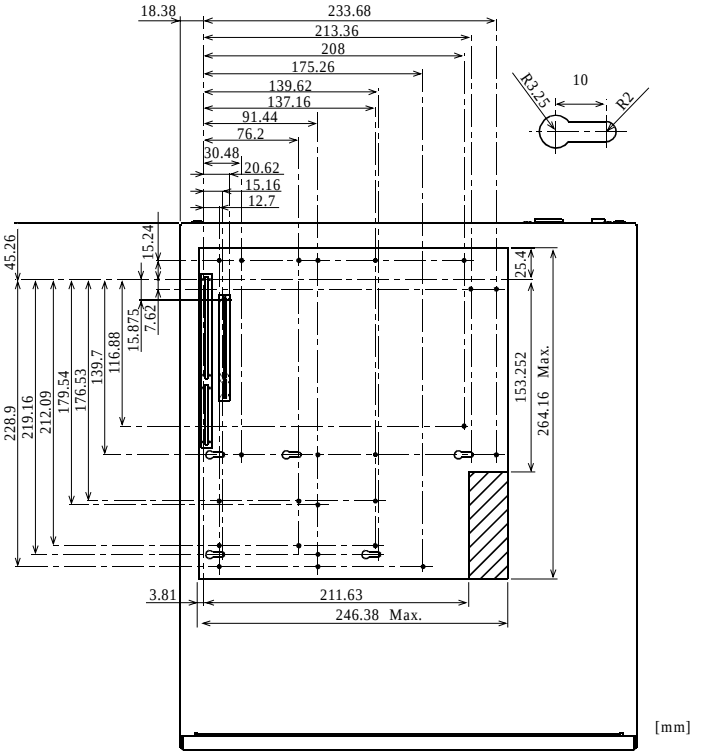


Figure 2.8. Positions of backplane installation holes

If a backplane or motherboard whose shaded area is not cut off is installed, then a 3.5-inch or 5-inch drive may not be installed properly depending on the height of the installed parts, etc.

3. Installing the Motherboard

Installing the backplane/motherboard

There are various types of backplanes and motherboards and their installation hole positions are all different. However, basically any of them can be installed by following the same procedures.

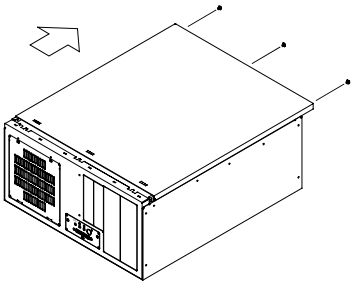
Preparation

(1) Turn the power switch off.

(2) Pull the power plug of the unit from the wall outlet.

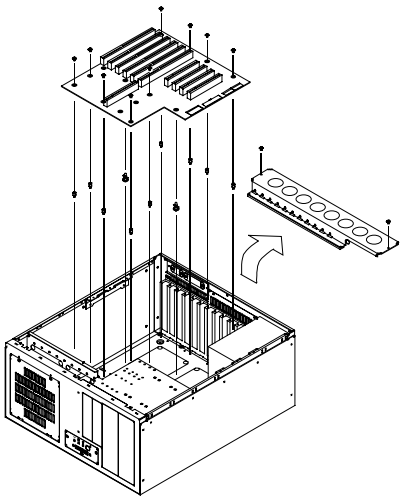
To install the backplane/motherboard

(1) Remove the screws fastening the top cover, then remove the cover.
When loosening the screws, use the appropriate type of screwdriver that fits the screw head.



(2) First remove the fall-off prevention bar from the expansion board.
Next, fix the attached hexagon spacers or plastic spacers to the holes in the main unit and place the backplane/motherboard on it and fix it with screws.

In this case, select the positions of fixing holes so that the backplane or motherboard can be fixed in a balanced manner.



(3) Return the fall-off prevention bar and cover to their original positions and fix them with screws.

Installing an expansion board

Various types of boards can be installed in the expansion slot. However, any of them can be installed following the same procedures.

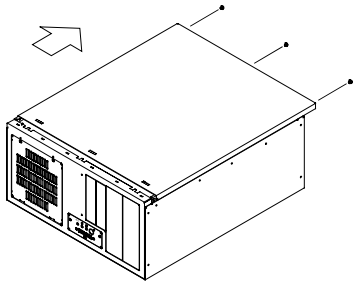
Preparation

(1) Turn the power switch off.

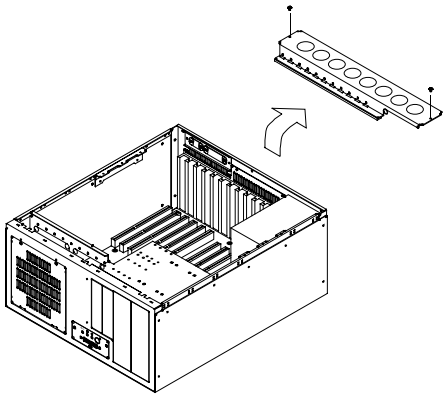
(2) Pull the power plug of the unit from the wall outlet.

Insertion of expansion board

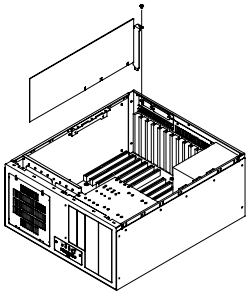
(1) Remove the screws fastening the top cover, then remove the cover. When loosening the screws, use the appropriate type of screwdriver that fits the screw head.



(2) Remove the fall-off prevention bar from the expansion board.



(3) Install the expansion board and fix it with screws.



(4) Return the fall-off prevention bar and cover to their original positions and fix them with screws.

Unplugging an Expansion Board

To unplug an expansion board, follow the steps below in the reverse order of plugging it.

(1) Before starting removing the expansion board, pull the power plug of the unit from the wall outlet.

(2) Following the same procedures as for insertion, remove the bracket fixing screws of the slot from which you want to remove the board.

(3) Remove the board by pulling it at a right angle to the expansion slot.

(4) Use the screw to fasten the bracket removed when plugging the board.

(5) Replace and screw the cover.

Replacing the connector plate

The supplied connector plate has holes for accepting connectors. If necessary, the supplied connector plate can be replaced with another plate of different shape.

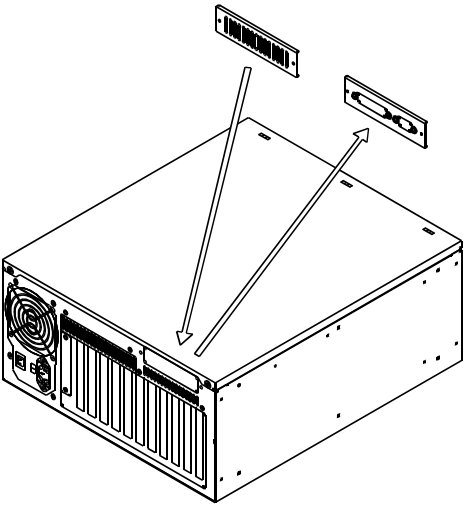


Figure 3.1. Replacing the connector plate

Installing Disk Drives

FA-UNIT-F11BE/FA-UNIT-F11ME can have two 5-inch drives and two 3.5-inch drives built in it.

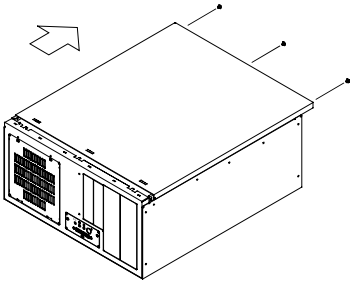
Preparation

(1) Turn the power switch off.

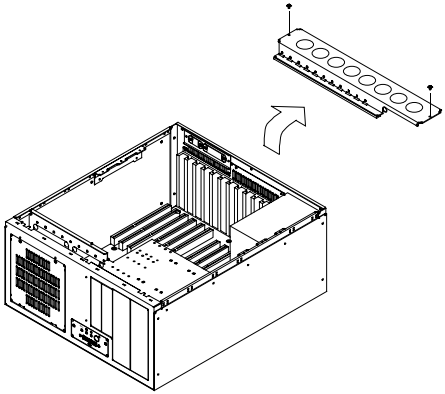
(2) Pull the power plug of the unit from the wall outlet.

Installing Disk Drives

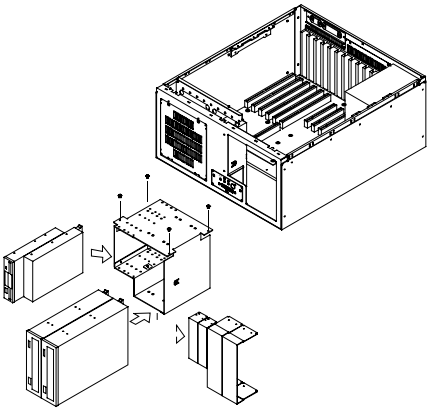
(1) Remove the screws fastening the top cover, then remove the cover. When loosening the screws, use the appropriate type of screwdriver that fits the screw head.



(2) Remove the fall-off prevention bar from the expansion board.



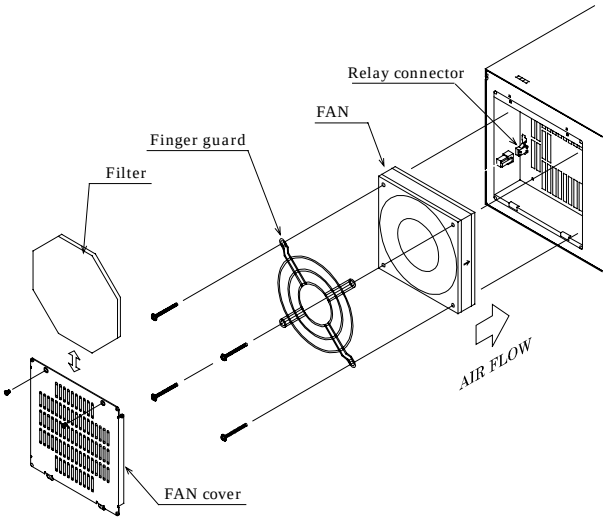
(3) Remove the drive fixing bracket and install drives.
Connect the cables and fix them to the original position of the chassis.



(4) Return the fall-off prevention bar and cover to their original positions and fix them with screws.

Installing/Removing a fan and filter

You can install/remove a fan and filter, without removing the top cover.



The installation of the fan is obtained in the reverse order of detaching.

Figure 3.2. Installing/Removing a fan and filter

Installation conditions

To prevent a temperature rise, install this chassis at a distance of at least 50mm from obstacles such as walls.

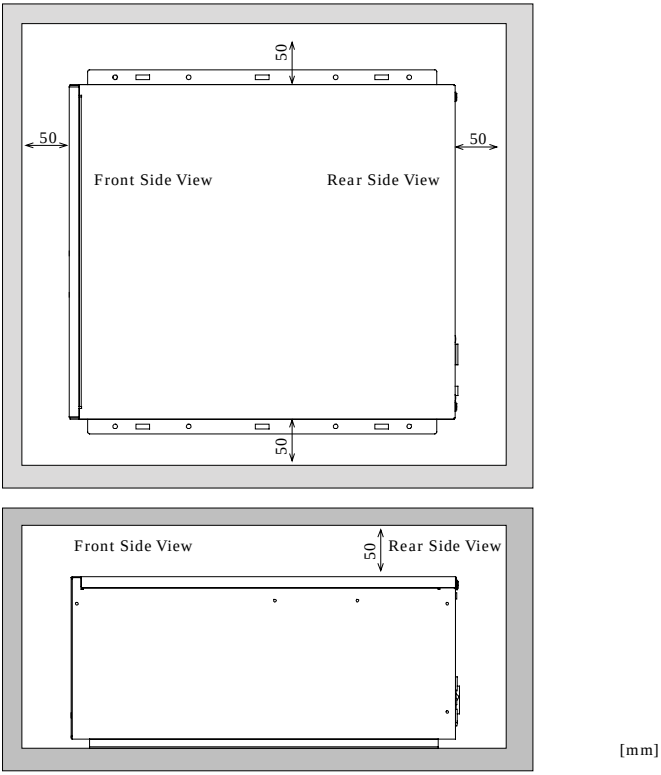


Figure 3.3. Installation conditions

Installing the wall mount bracket

Installing the attached bracket enables wall mount. The bracket can be installed in two ways. Install the bracket using an appropriate method in accordance with the use environment.

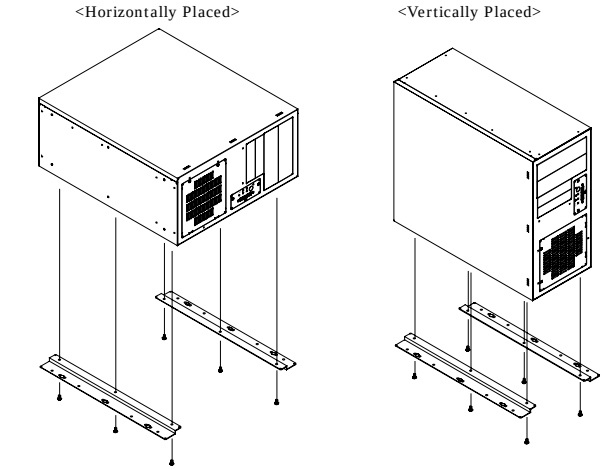


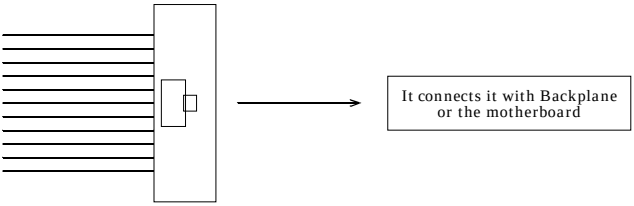
Figure 3.4. Installing the wall mount bracket

4. Connectors

Power Supply

This product has built-in power supply units. The backplane or motherboard power supply connector and HDD and FDD power supply connectors are provided. Connecting these connectors enables the motherboard, HDD and FDD to operate.

Backplane or motherboard power supply connectors



Pin No.	Function	Pin No.	Function
1	+3.3V	11	+3.3V
2	+3.3V	12	-12V
3	COM	13	COM
4	+5V	14	ON/OFF
5	COM	15	COM
6	+5V	16	COM
7	COM	17	COM
8	P.G	18	-5V
9	+5VS	19	+5V
10	+12V	20	+5V

Figure 4.1. Backplane or motherboard power supply connectors

HDD/FDD power supply connectors

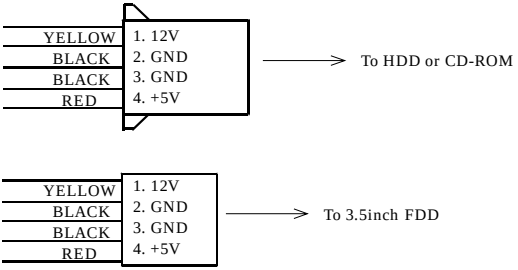


Figure 4.2. HDD/FDD power supply connectors

Switches and LEDs

This product has two switches and two LEDs at the front.

One of the switches is the power switch for turning the power supply on and off. The green LED (POWER) comes on when you turn the power on.
The second switch is the reset switch for rebooting the system.
The red LED (HDD) indicates the access status of the hard disk drive.

These switches and LEDs operate with their respective connector cables connected to the corresponding connectors on the SBC(CPU board).

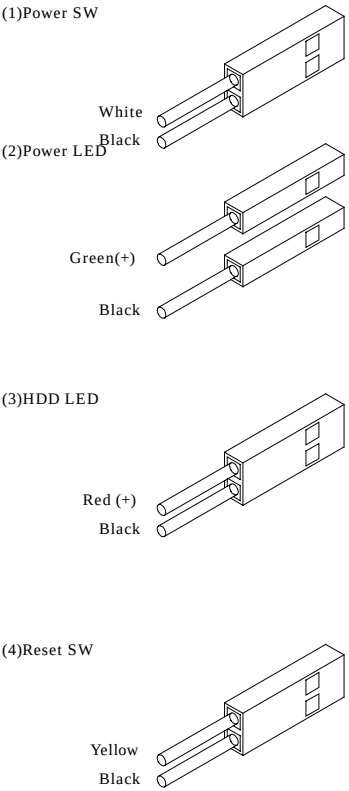


Figure 4.3. Switch and LED Connector Cables

USB Connector

This product has two ports for USB cable external connection connectors.

The USB connector operates when a cable is connected to the relevant connector on SBC (CPU board) with a USB internal connection connector.

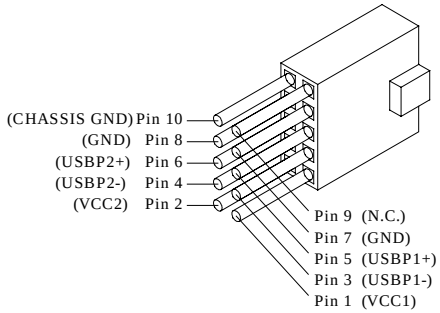


Figure 4.4. USB Connector Cable

5. System Reference

Specification

Table 5.1. General specifications

Item	Specification	
	FA-UNIT-F11BE	FA-UNIT-F11ME
Number of user slots	9 full-size slot + 2 half- size slot	4 full-size slot
Installable board (mm)	Full-size : 340.5(L) x 122.0(H) (Max.) Half-size : 220.0(L) x 122.0(H) (Max.)	
Rack mountable	EIA 19-inch rack mountable	
Fan	Inlet x 1 (Excluding power supply fan)	Inlet x 1, Outlet x1 (Excluding power supply fan)
Drives	5-inch x 2 3.5-inch x 2	
Number of slot holes	11	4
Installable Backplane dimensions (mm)	246.4(W) x 264.2(D) (Max.) (For details see "Figure 2.8".) BPM-1111, BPI-1111, BPC-1111	None
Installable motherboard dimensions (mm)	None	Micro ATX size, 246.4(W) x 264.2(D) (Max.) (For details see "Figure 2.8".)
Dimensions (mm)	364(W) x 177(H) x 420(D) (Excluding raised parts)	
Weight	About 11kg (Excluding backplane, motherboard, drives, etc.)	

Table 5.2. Power supply specifications

Item	Specification
Power capacity *1	+5V 25A -5V 0.3A +3.3V 25A -12V 0.8A +12V 15A +5VSB 2A
Overall maximum power supply capacity	300W
AC Power Voltage *2	115VAC/230VAC(50/60Hz) (SW selection)
Input current	10A(115VAC)/5A(230VAC)
AC Outlet	None

*1 Total of +5V and +3V shall not exceed the power of 200W.

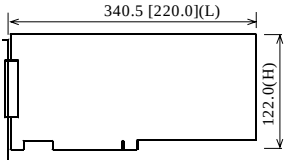
*2 Input voltage range for AC power supply : 90 - 132VAC / 180 - 250VAC

Table 5.3. Environment specifications

Item	Specification
Operating temperature	0 - 50°C
Operating humidity	10 - 80%RH(No condensation)
Storage temperature	0 - 60°C
Storage humidity	10 - 90%RH(No condensation)
Vibration resistance	10 - 57Hz/semi-amplitude 0.075mm 57 - 150Hz/1.0G
Impact resistance	10G, half-sine shock for 11 ms
Floating dust particles	Not to be excessive
Corrosive gases	None

* The values in the above are constrained with the boards or the components such as drives installed inside the product, so the figures do not necessarily represent the tolerances for every operating condition.

Dimensions of installable board (Max.)



[ ] is a alf size case. [mm]

⚠ CAUTION

The internal power supply and cooling fan, fan filter are consumables, requiring replacement after use for a certain period of time.

Although the standards are given below, their lives may be shortened depending on the operating environment. The life span is likely especially to become short extremely in the place which takes influence of trash, metallic powder, the place which is much dust or oil, corrosive gas.

- Power supply : About 5 years (25°C, 60%, official environment)
- Cooling Fan : About 5 years (25°C, 60%, official environment)
- Fan filter : About 1 year (25°C, 60%, official environment)

FA-UNIT-F11BE
FA-UNIT-F11ME
User's Manual

CONTEC CO., LTD.
November 2006 Edition

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Management No. A-51-066
Parts No. LYFB623